• General Description

N-CHANNEL MOSFET in a SOT-23 Plastic Package.

• Features

■Sensitive gate trigger current and Low Holding current.

■ESD protected up to 1KV.

■Very fast switching

•Application

■switching and phase control applications.

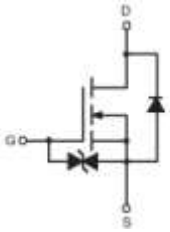
■SMPS 2nd Synchronous Rectifer

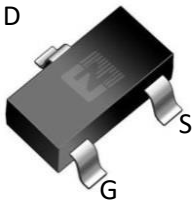
• Product Summary

V_{DS} =60V

$R_{DS(ON)}$ =5Ω

I_D =300mA





SOT-23

RoHS

•Ordering Information:

Part NO.	ZM2N7002K
Marking	ZM2N7002
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000

•Absolute Maximum Ratings (T_C =25℃)

Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Drain-Gate Voltage	V_{DGR}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	$I_{D@}$TC=25℃	300	mA
	$I_{D@}$TC=75℃	228	mA
	I_D @TC=100℃	189	mA
Pulsed Drain Current	I_{DM}	800	mA
Total Power Dissipation	P_D	350	mW
Storage Temperature	T_{STG}	-55 to 150	℃

●Electronic Characteristics (T_a =25℃)

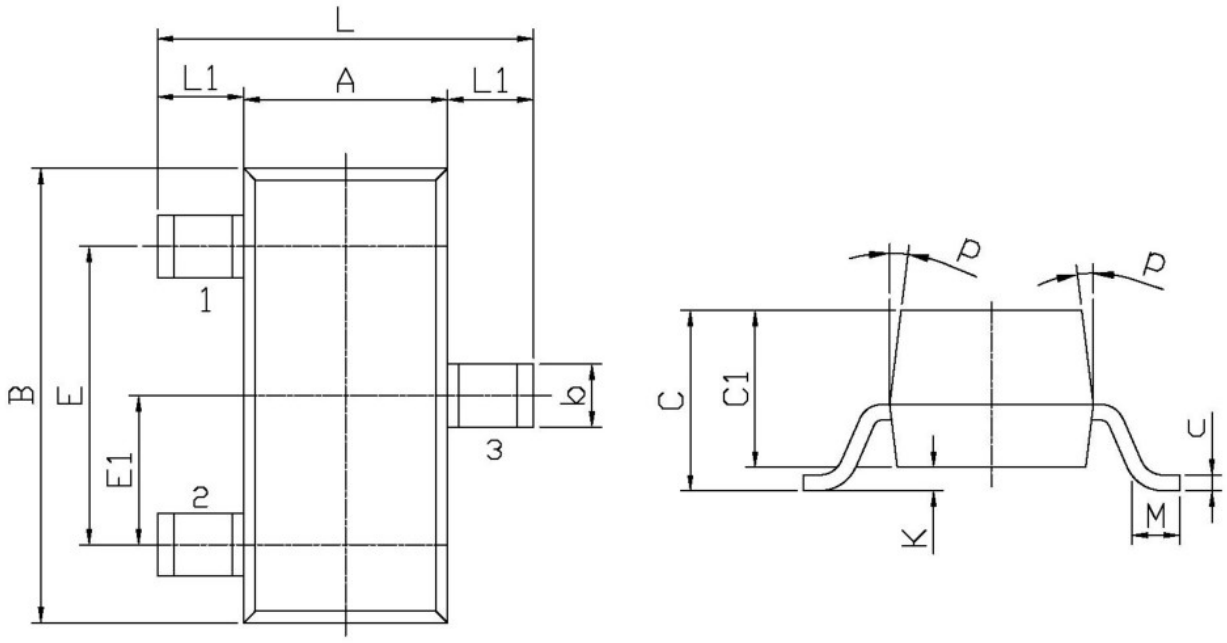
Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} =0V,I_D =10uA	60			V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS} =V_{DS}, I_D =1mA	1.0	1.6	2.5	V
Drain-Source Leakage Current	I_{DSS}	V_{DS}=60V, V_{GS} =0V			1.0	uA
Gate- Source Leakage Current	I_{GSS}	V_{GS}=±20V ,V_{DS} =0V			±10	uA
Static Drain-source On Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=0.5A			5	Ω
		V_{GS}=5V, I_D=0.05A			5.5	Ω
Drain-Source On-Voltage	$V_{DS(ON)}$	V_{GS}=10V, I_D=500mA			2.5	V
Drain-Source On-Voltage	$V_{DS(ON)}$	V_{GS} =5.0V, I_D =50mA			0.275	V
Forward Transfer Admittance	Y_{fs}	V_{DS} =5V, I_D= 0.2A	80			mS
Source-Drain Voltage	V_{SD}	Is=500mA			1.28	V

●Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C_{iss}	V_{GS} = 0V	-		50	pF
Output capacitance	C_{oss}	V_{DS} =25V	-		25	
Reverse transfer capacitance	C_{rss}	f = 1MHz	-		5	
Turn – on delay time	$t_{d(on)}$	V_{DD} =25V I_D =500mA			20	ns
Turn - off delay time	$t_{d(off)}$	R_G =25Ω R_L =25Ω V_{gen} =10V			40	ns

●Dimensions(SOT23-3)

Unit：mm



Unit: mm

Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

●Electrical Characteristic Curve